## Clarifications per Received Questions -- Tank 2A, Lake Havasu City

- General Note Regarding Substitution Requests: CONTRACTOR to refer to Specification Section 00700, page 12, Item 10.0 Substitutions, including Paragraphs 10.1 and 10.2, and Specification Section 01631. Per Specification Section 00700, paragraph 10.2 'Contractor shall have fourteen (14) days after issuance of Notice to Proceed for submission of data substantiating a request for substitution of an "or equal" item.'
- 2. Question: Construction indicated at 120 days, roof procurement lead time 14-16 weeks alone. Construction timeframe will need to be extended, or contractors will have no choice but to include Liquidated Damages in proposed cost, needlessly increasing bids. AND In our experience, we believe that 120 days may be sufficient for the rehab with the steel roof (although it is close). We do not, however, believe that a rehab with an aluminum roof, nor the tank replacement with an aluminum roof can be achieved in that time period. If forced to bid within that time parameter, we will have to allow for the LD cost of the extra time. We would request that you reconsider the time allowance for all of the aluminum roof options. AND Section 00800 pg. 3 8.0 We ask that consideration be given to extend the 120 day contract period. We have spoken to the aluminum dome suppliers and they are telling us that the lead time is 14 16 weeks after approved submittals. Each supplier is assuming that the aluminum coating will take approximately 3 to 4 weeks. Answer: Refer to Bid Addendum 1.
- 3. **Question:** Section 13311 pg. 4 2.2.D We understand, with respect to the steel tank roof option, the objective is to remove all of the internal structure. This can be done either with an self- supported umbrella or an externally structured umbrella roof. Would consideration be allowed to structurally design and erect the externally structured umbrella roof?? **Answer:** All submittals will be evaluated for compliance with contract drawings and specifications.
- 4. **Question:** Section 01210 pg. 3 thru 5 3b, 4b, 5b, and 6b. We strongly suggest you consider another approach with respect to the removal and replacement of the existing 2A-06 tank bottom. If your consideration is to remove the entire tank floor including the 2" exterior chime, by means of jacking or any other lifting method, you will not be able to hold approximately 50 tons of an 86' diameter x 24' high cylinder round. There is another avenue you might consider. API 653, which you reference in your specifications, discusses replacement of tank bottoms. This particular method is done at fuel and water facilities all over the country. In a "nutshell" the code requires the removal of a ¾" slice out of the lowest ring of the tank, approximately 4" above the tank floor. The lower 4" and the upper 23'-7 1/4" of shell are held in aligned position with heavy plate U-brackets welded in position above and below the 3/" slice. Fill material (usually fiber glass reinforced concrete) is placed level with the 4" elevation above the tank floor. The concrete for this particular tank would be crowned up at the tank center pursuant to the AWWA D100-11 and API-650 codes. The concrete would be allowed to cure, and the new floor would be installed on top. The new floor would protrude 2" beyond the outside of the bottom ring per the afore mentioned codes. Once the floor is tack welded together, the Ubrackets can be removed, allowing the tank shell to settle into its new position. Using the API-653 model would also impact the municipality financially. You would not need to remove the existing floor, which obviously holds the tank round, the 3" PVC, 3/8" pea gravel, the 6 mil vapor barrier and the oiled sand would not be needed. It appears to us, that this building



- option would be beneficial for the city, and a safer way to accomplish this particular task. **Answer:** CONTRACTOR to comply with drawings and specifications.
- 5. **Question:** Section 02652 pg. 1 1.1A We suggest removing the CML from the overflow. The overflows responsibility is to structurally failsafe the tank in the event of a catastrophic controls failure. That said, the likelihood of the overflow ever seeing water is highly unlikely if ever. In the event that it does see product, the overflow will evacuate itself once the event is remedied. If your concern is the interior degradation of the pipe, we would suggest flanging the cone, elbows and straight runs of pipe. This would allow the coating applicator the ability to surface prep and correctly line the pipe interior with the same product as the interior of the tank. **Answer:** CONTRACTOR to comply with drawings and specifications.
- 6. **Question:** Section 09950 pg. 3 1.3.E We ask that consideration be given removing the dehumidification requirement. This is an extremely expensive proposition given that we are in a geographic location where humidity is not a factor. The specs discuss the possibility of the city suppling their own NACE inspector. The specs also require the contractor to supply his own NACE inspector. In either case, a NACE inspector will be on hand to monitor and record humidity readings as well as many other applicable tasks. If the NACE inspector finds that climactic conditions do not comply with AWWA D102, the manufactures product sheets or the specs they will not allow the applicator to apply paint. This must be done whether you use humidification equipment or not. It seems to us, given the low humidity for the area, the city would appreciate a substantial cost savings. **Answer:** CONTRACTOR to comply with drawings and specifications.
- 7. **Question:** Section 09950 pg. 3 1.3.J The TIC report pg. 8 #1 discusses that the exterior of the tank appears to be in good overall condition and exhibits good to fair adhesion to the steel. Page 15 #4 of the report recommends a high pressure wash, spot surface prep, spot priming, an entire intermediate prime and finish coat of paint. If consideration were given to doing the exterior coating task in this fashion, it would preclude the need for entirely encapsulating the tank. This would obviously be a significant savings to the city. **Answer:** CONTRACTOR to comply with drawings and specifications.
- 8. **Question:** Section 09950 pg. 12 2.3.D.1 a. The question was asked about whether we could use an NSF a paint product other than a 100% solids material. The city representative prefers that we use the product specified. **Answer:** CONTRACTOR to comply with drawings and specifications.
- 9. **Question:** Section 09950 pg. 19 3.5.H.4- a. If we are reading this section correctly, it won't allow us to keep the blast media on the floor for roof and shell overspray protection. We would ask that consideration be given, to allow us to leave the surface prep media on the tank floor during the application of interior paint to the underside of the steel tank roof and within 2' to 3' of the tank floor. The inherent problem with tarping the tank floor for over spray protection is that while moving your rolling scaffold over a tacky plastic tarp, the pneumatic scaffold tires ravel and tear the plastic barrier. This requires a re-blast of the entire floor. **Answer:** CONTRACTOR to comply with drawings and specifications.



- 10. **Question:** Section 09950 pg. 24 3.11.E We ask that consideration be given to remove this requirement. The original coating system done in 1999 was epoxy/polyurethane. Those products don't have a lead or heavy metal constituent. This spec section we feel, would be applicable if the product contained lead or heavies in excess of the state requirements. **Answer:** Refer to Bid Addendum 1.
- 11. **Question:** Section 13212 pg. 6-3.2.B-a. This section conflicts with how we are to repair pits in excess of 1/16" deep in spec section 09950 pgs. 16 and 17-3.2. R and S. Section 13212 call for pits in excess of 1/16" to be repaired with a  $\frac{1}{4}$ " "Dutchman" that covers the pit and welds to the existing tank shell. Section 09950 asks that the "major" pit be caulked with a NSF approved seam sealer. **Answer:** Refer to Bid Addendum 1.
- 12. **Question:** Sections 13212 and 09950 This is a general question that all of the different contractors will need, to properly prepare their bids. How much or how many areas need to be repaired on the existing tank shell. Normally, there is a separate pay item for the type of repairs, i.e.: minor, major or patching. Normally, major or patching repairs are more expensive than minor repairs. Another way to approach this repair issue is a square foot charge. **Answer:** Refer to Bid Addendum 1.
- 13. **Question:** Spec 13212, p. 7, D., 6 Aluminum gauge board specified. Would galvanized steel be an acceptable substitution? **Answer:** CONTRACTOR to comply with drawings and specifications.
- 14. **Question:** Section 13311 pg. 2 1.4.A The city has contracted Western Tech to supply a geotechnical report. This spec section paragraph leads us to believe, that the intent is for the contractor to generate his own separate soils report. If we are correct, won't the city be paying for services twice? It seems to us, that we should be allowed to utilize the existing document. **Answer:** Refer to Bid Addendum 1.
- 15. **Question:** Dwg C-5, footing detail 2 -- Can contractor propose alternate footing size and reinforcement if supported by engineered design report? **AND** Section 13311 pg. 10 3.2.F Please see the Western Tech soils report page 5, the second paragraph in section 6.2. The report is allowing us to use a ringwall no less than 16" wide. Will the contractor be allowed to bid a his own ringwall at least 16" wide or slightly wider, provided that he has an licensed Arizona structural stamp? **Answer:** CONTRACTOR to comply with drawings and specifications.
- 16. **Question:** Section 13311 pg. 4 2.1.I The following commentary is for information only. This particular tank is in a fairly active seismic area. In 1999 the AWWA code did not require as rigorous a seismic analysis as we are forced to do today. That said, we may find, that the 23' elevation discussed in the spec section, may be something less due to the slosh wave calculation discussed in AWWA D100-11. We will not know for sure until we do the submittal calculations. **Answer:** CONTRACTOR to comply with drawings and specifications.
- 17. **Question:** Section 13311 pg. 12 3.8.B a. This section discusses the X-Ray aggregate footage requirement. This section is far in excess of the AWWA requirements. The code aggregate footage stipulation is 100′ for primary stress seams (vertical seams) and 200′ for secondary stressed seams (horizontal seams). Would consideration be given to X-Ray per the applicable code? b. Regardless of whether the 50′, 100′ or 200′ stipulation is instituted. We suggest that the city inspector choose the X-Ray locations. This would preclude the need for the engineer to retain the services of yet another X-ray company. Obviously this would save the city money. **Answer:** CONTRACTOR to comply with drawings and specifications.



- 18. **Question:** Section 15910 pg. 2-2.10 a. Can the tank contractor chosen to design and erect the tank, supply his own clog-resistant atmospheric roof vent? **Answer:** Yes, as long as the roof vent complies with contract drawings and specifications requirements. Refer to listed Item 1 above regarding substitution requests.
- 19. **Question:** C5 pg. 11 of 22 Detail #2 Please see note #4. This questions relates back to section in the soils report that was discussed previously in the specification questions. This note suggests that the tank manufacturer can design his own ringwall. It also notes that "values shown on the detail are minimum". Would consideration be given to allow the contractor to design his own ring wall per the soils report and with a licensed Arizona structural stamp? **Answer:** CONTRACTOR to comply with drawings and specifications.
- 20. **Question:** CD 3 pg. 15 of 22 Detail # 2
  - a. The drawing discusses two (2) crane base plates that will be used in conjunction of a 1200 lb. portable crane. Are the two (2) crane bases to be supplied on the aluminum dome roofs?
  - b. We are assuming that the portable crane bases are being used for personnel retrieval. If that is in fact the case, does the structure (the tank roof, be it aluminum or steel) need to support the OSHA required 5000 lb. load?
  - c. Is the contractor to supply the Commander Series 5PT10 portable crane? **Answer:** Refer to Bid Addendum 1.
- 21. **Question:** Dwg CD-3, Detail 1 Does a cage need to be provided for the ladder? The answer was, the exterior ladder has been provided with a Sat-T-Climb device and the ladder cage will not be required. **Answer:** CONTRACTOR to comply with drawings and specifications.
- 22. **Question:** C3 9 of 22 and C6 12 of 22 If the aluminum dome is selected is the handrail to be aluminum? If the handrail is aluminum will it be coated with either the PVDF or anodized? **Answer:** Yes, refer to Bid Addendum 1.
- 23. **Question:** We believe that requiring a QP1 coatings contractor is an unnecessary expense for the city. With a NACE 3 inspector, a qualified coatings company can accomplish this work for markedly less cost. We would request that you consider dropping this requirement, or opening up the bidding to all qualified coatings contractors. Just to note-there are no QP1 contractors located in the state of Arizona, therefore a QP1 bidding the project will incur additional travel costs to prosecute the job. **AND** Section 09950 pg. 4 - 1.4.A.1 – We ask that consideration be given to remove the QP1 requirement. We believe there is one very cogent fact; the ultimate goal for the city, is to be provided with the best application possible. This is done with the availability of a qualified NACE inspector, be it city or contractor supplied. As noted previously, the specifications require the contractor to supply his own qualified NACE inspector. The licensed QP1 entity must have their own in house NACE inspectors. It seems to us, how we avail ourselves of proper NACE inspection is moot. The important issue from the cities perspective is that proper inspection be done. We feel compelled to bring one other issue to the cities attention. The cost historically, between a QP1 and a non QP1 contractor is in the general ballpark of \$6.00 to \$8.00 per square foot more for the QP1 company. Assuming that the steel roof option is decided upon, the cost difference would generally be about \$180,000.00 to \$240,000.00 additional using a QP1 contractor. Answer: CONTRACTOR to comply with drawings and specifications.



- 24. **Question:** *Is ADEQ tank permit to be done by Owner/Engineer or by Contractor?* **Answer:** An authority to construct permit has been obtained from the ADEQ by the Owner/Engineer.
- 25. **Question:** \$10 Million liability requirement is this going to be enforced on this contract? Prior typical has been \$2 Million. This will potentially increase cost. **Answer:** CONTRACTOR to comply with drawings and specifications.
- 26. **Question:** *Will shop inspections be conducted during manufacturing?* **Answer:** Yes, at the sole discretion of the City.
  - **Question:** *Is the project Davis-Bacon? Prevailing Wage?* **Answer:** Refer to Bid Addendum 1.
- 27. Question: Does the project include Buy American Clause? Answer: Refer to Bid Addendum 1.
- 28. **Question:** Will engineering reports by an AZ licensed Civil engineer be acceptable, or does the engineer need to have Structural licensure? **Answer:** Per Specifications 05162, 13212, 13311, an AZ licensed Structural Engineer is required to provide engineering reports.
- 29. **Question:** Can the contractors view the interior of the Tank? **Answer:** No, due to safety concerns. Reference provided TIC Report and photos.
- 30. **Question:** What is the project address? **Answer:** 2938 Havasupai Boulevard, Lake Havasu City, Arizona.
- 31. Question: Who was the original tank supplier/builder? Answer: Schuff Steel Company
- 32. **Question:** Who should questions be addressed to? **Answer:** Jonathan Tull <u>jonathan.tull@atkinsglobal.com</u>. Per Specification Section 00100, page 6, Item 17., written inquires shall be received... by August 24, 2016, 4:00PM, Arizona Time.
- 33. **Question:** Reference Dwg CD-3: Handrail on roof- A welded aluminum handrail cannot be provided as shown. Will Hollaender Speedrail with exposed fittings be acceptable? **Answer:** As long as it complies with Contract Plans and Specifications. Refer to listed Item 1 above regarding substitution requests.
- 34. **Question:** Reference Dwg CD-3: Anchor tie-down- The steel tie-down anchor shown in Detail 3 cannot be provided as shown. The Aluminum Dome Roof can be supplied with a ¾" SS shoulder eyebolt attached directly on one of the structural nodes for superior attachment and safety. Is this acceptable? **Answer:** As long as it complies with Contract Plans and Specifications. Refer to listed Item 1 above regarding substitution requests.

